

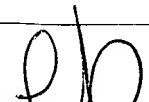


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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/681,941	06/28/2001	Michael John Davis	60LT01103	1253
23413	7590	08/24/2004	EXAMINER	
CANTOR COLBURN, LLP 55 GRIFFIN ROAD SOUTH BLOOMFIELD, CT 06002			ROBERTSON, JEFFREY	
			ART UNIT	PAPER NUMBER
			1712	
DATE MAILED: 08/24/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/681,941	DAVIS ET AL.	
	Examiner	Art Unit	
	Jeffrey B. Robertson	1712	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 May 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) 29-32, 36 and 37 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11, 14-17, 20, 21, 23-28, 33-35, 38 and 39 is/are rejected.
- 7) ☒ Claim(s) 12, 13, 18 and 19 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>05272004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 22 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

For claim 22, there is a lack of antecedent basis in the terms "the thermosetting resin" and "the compatibilizing agent". The claim does not set forth what components correspond to the thermosetting resin and what components correspond to the compatibilizing agent.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-11, 14-17, 20, 21, 23-28, 33-35, 38 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Clough (U.S. Patent No. 6,518,362) in view of Mallikarjun (U.S. Patent No. 5,212,239).

The reference teaches a curable composition comprising polyarylene ether, uncured epoxy resin, and a compatibilizer that includes functionalized block copolymers comprising styrene including maleated Kraton polymers. See col. 3, line 20 through col.

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5, line 25 and col. 9, lines 39-58. The compositions are prepared by melt blending the components at low temperature so as to not cure the epoxy resin. See col. 10, line 44 through col. 11, line 10. As suggested by the reference, it would have been obvious to combine a polyarylene ether, epoxy resin, a maleated block copolymer comprising styrene Kraton compatibilizer and aromatic polyamine curing agent by melt blending at low temperature to obtain a curable molding composition. Variation in order of addition of components and blending temperature would have been obvious modifications to one of ordinary skill in the art in order to obtain the blend with uncured epoxy resin when using the amine curing agents.

Mallikarjun teaches compatibilized polymer blends containing vinyl polymers and styrene containing compatibilizers. In column 10, lines 2-20, Mallikarjun teaches that maleated styrene block copolymers are used where the block copolymer is styrene-ethylene/1-butene-styrene. The maleated copolymer are Krayton polymers.

It would have been obvious to one of ordinary skill in the art to use the specific maleated copolymers set forth in Mallikarjun in the compositions of Clough. The motivation would have been that Clough teaches a genus of functionalized block copolymers comprising styrene including maleated Kraton polymers. One of ordinary skill in the art would have turned to Mallikarjun for specific species to use for maleated Kraton polymers.

Response to Arguments

5. Applicant's arguments with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection. In addition, applicant argues that the functionalized block copolymers of Clough necessarily include heteroatom functional groups that chemically distinguish the molecules from the compatibilizers set forth in the claims. The examiner disagrees. The recitation of "styrene-ethylene-butylene-styrene" block copolymers does not exclude functional styrene-ethylene-butylene-styrene block copolymers. The rejection of claims 18 and 19 has been withdrawn in light of applicant's arguments. The double patenting rejection has been withdrawn in light of the terminal disclaimer filed by applicant.

Allowable Subject Matter

6. Claims 12, 13, 18 and 19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. For claims 12 and 13, the Clough et al. reference does not teach or suggest the specific compatibilizers of these claims.

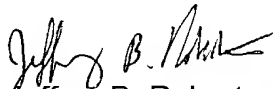
7. Claim 22 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action. Although this claim was previously indicated as allowed. Upon review of the claim, the examiner discovered the issues set forth above.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey B. Robertson whose telephone number is (571) 272-1092. The examiner can normally be reached on Mon-Fri 7:00-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy P Gulakowski can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Jeffrey B. Robertson
Primary Examiner
Art Unit 1712

JBR